

9.04
935

ESO #935

EFFECTS OF LOW INTEREST RATES ON THE
POOR IN LOW INCOME COUNTRIES

by

Dale W Adams
Richard L. Meyer

Professors, Department of Agricultural
Economics and Rural Sociology
The Ohio State University
Columbus, Ohio 43210

Paper Presented at the 18th
International Conference of
Agricultural Economics
August 24 - September 2, 1982
Jakarta, Indonesia

EFFECTS OF LOW INTEREST RATES ON THE
POOR IN LOW INCOME COUNTRIES

by

Dale W Adams and Richard L. Meyer¹/

The Ohio State University

Over the past three decades agricultural credit has received considerable attention in low income countries as governments have tried to stimulate output and help the rural poor through credit. Recent analyses, however, reveal major problems in many agricultural credit programs. Cheap credit policies appear to fragment rural financial markets so that resources are not allocated efficiently. Low interest rates also undermine the financial integrity of financial intermediaries and force them to become highly dependent on loanable funds from central banks or external aid agencies. Despite the high hopes held for cheap credit as an effective way to help the rural poor, recent analyses show that, instead, it increases rather than decreases income concentration.

In the discussion that follows, we briefly outline four ways that financial markets affect income distributions: through negative impacts on savers, through leverage, through negative real rates of interest, and through defaults. We conclude with suggested policy changes that might reduce the adverse impact financial markets have on income distributions.

Impact on Savers

Cheap credit policies force intermediaries to pay low rates on financial deposits. This has a two-fold effect

on saver: they receive a lower rate of return than they would if higher rates were paid, and intermediaries usually offer fewer deposit services. With weak incentives to save, depositors often keep only small deposit accounts and few people open new accounts. This may result in deposits being an expensive way for the intermediary to mobilize loanable funds, despite the low interest rates paid. As a result, intermediaries often do not provide deposit services, and if they do, the quality of the services are very poor. Intermediaries may even discourage savings deposits because cheaper funds are available from the central bank through rediscount windows.

Under appropriate conditions financial savings deposits are a major way for low and medium income groups to hold a significant part of their assets. This was especially true some years ago in Taiwan where the rural poor were given opportunities and incentives to expand savings deposits (Ong and others). While the rural rich use financial deposits for transaction needs, they are too financially sophisticated to hold a large part of their assets in this form when interest rates are low. Low interest rates effectively tax those who hold these financial assets, the low and the medium income groups. Although difficult to quantify, low interest rates on savings have a very adverse effect on actual and potential incomes of the poor.

Loan Leverage

If farmers expect to repay loans and pay positive real

rates of interests on loans, they must expect to realize a profit from borrowing. Expected gains from leverage are the driving force behind normal loan demand for productive purposes. Depending on the circumstances, some borrowers will realize net gains that exceed their expectations, while others will realize less. Those farmers who get consistently high rates of net return from loan use will gain in income and assets relative to those who realize low net rates of return or who do not borrow.

If credit were allocated on the basis of expected economic returns, and all producers had equal access to loans, the equity implications of the benefits from leverage might be overlooked. As Gonzalez-Vega points out, however, relatively few farmers in most low income countries receive formal institutional loans. In most of these countries fewer than 20 percent of the farmers receive formal loans, and it is common for less than one-quarter of the borrowers to receive three-quarters or more of the total amount of formal loans extended. This result is due to excess demand caused by low interest rates. Excess demand forces lenders to minimize lending costs by stressing large loans to established borrowers with abundant collateral and ample net worth. These borrowers may or may not realize the highest net returns from the use of borrowed resources. It is just as likely that some of the excluded individuals--small potential borrowers, those without loan experience, and those with less collateral--may have higher marginal returns.

Differential access to credit and the effect of leverage can have a substantial impact on income distributions over time. It is virtually impossible to document the actual impact, but Gonzalez-Vega provides a hypothetical example that illustrates how powerful the impact can be. He discusses a two-producer case where only one has access to credit. Initially, both producers have the same net worth, and realize the same average returns from investments. If the borrower realizes a constant average real return of 25 percent on investments, pays a real rate of interest of 5 percent and borrows an amount equal to net worth each year, in 5 years he will have more than twice the net worth of the non-borrower. In ten years the borrower's net worth will be more than 4 times the amount of the non-borrower, and in 20 years it will be almost 20 times the net worth of the non-borrower.

Subsidies Via Negative Real Rates of Interest

Loans are different from other commodities because credit carries two prices: nominal and real. The nominal price is the loan's contractual interest rate. The real rate is the nominal rate adjusted for changes in the purchasing power of money. The value of financial instruments is largely tied to their exchange value for real goods and services. The purchasing power of these claims declines with inflation. If the rate of inflation exceeds the nominal

rate of interest on a loan, the purchasing power of the loan declines between the time it is made and the time it is repaid. With negative real rates of interest, purchasing power is transferred from lenders (or savers) to borrowers.

A simple example can be used to illustrate this income transfer. Assume a borrower receives a one-year \$1,000 loan at a nominal 10 percent rate. Also assume that he or she uses the loan to buy products that inflate in nominal value at a rate of 30 percent during the next 12 months. At the end of the year the borrower sells the products for \$1,300, but only needs to repay the lender \$1,100, so he or she ends up with \$200 in additional purchasing power (or income). However, the lender ends up with \$1,100 that will only buy approximately 80 percent of the goods and services that could have been purchased with the original \$1,000. Roughly one-fifth of the original purchasing power of the loan was transferred from lender to borrower because of the negative real interest rate.

Recently, negative real rates of interest have been in force in virtually all low income countries. Regionally, these problems have been most severe in Latin America where the regional, annual weighted average rate of inflation in the past few years has exceeded 50 percent. Inflation has also intensified in Africa and the Middle Eastern countries in recent years. While inflation has been less serious in Asian countries, few countries in the region have maintained positive real rates on agricultural loans over the past decade.

It is difficult to precisely estimate the amount of income transferred to borrowers via negative real rates of interest. Multiple nominal interest rates are commonly applied to agricultural loans in a country and information is not available on the volume of loans extended at each rate. It is also difficult to determine the economic characteristics of borrowers; banks generally maintain information on the characteristics of loans not borrowers. Because of multiple loans to wealthy borrowers, it is incorrect to infer much about borrower characteristics from loan characteristics in one institution. It is also common for well-to-do borrowers to have outstanding loans simultaneously from several lenders.

Substantial insights into who receives the benefits of negative real rates of interest on agricultural loans can be gleaned from recent research on Brazilian agricultural credit. This research shows that the magnitude of the subsidy is very large and heavily concentrated (Adams and Tommy; Araujo, Rego and Wright; Sayad). Because formal agricultural credit in Brazil makes up close to half of the total formal loans extended in low income countries, transfers in that country carry substantial weight in worldwide transfers.

Cheap agricultural credit has been the leading edge of Brazilian agricultural development policies. From 1960 to 1970, the real value of formal agricultural loans made each year quadrupled (Meyer and others). In the period 1970 to

TABLE 1. IMPLICIT INTEREST RATE SUBSIDIES IN BRAZILIAN
AGRICULTURAL CREDIT, 1970-1980

Year	Credit received			Annual inflation rate (%)	Implicit subsidy (million US \$) ^{b/}
	No. of contracts (thousands)	Nominal Value - - million CR\$ - -	Deflated ^{a/} Value		
1970	1,191	9,248	213,648	19.6	72.5
1971	1,253	12,870	246,870	19.4	78.0
1972	1,266	18,669	306,162	15.8	12.2
1973	1,400	30,334	432,119	15.5	10.6
1974	1,450	48,273	534,771	34.6	960.1
1975	1,856	89,997	780,102	29.2	1,023.4
1976	1,832	130,226	799,030	46.4	2,178.5
1977	1,722	165,859	713,021	38.8	1,147.3
1978	1,896	233,942	725,238	40.8	1,618.6
1979	2,373	448,731	903,380	77.2	2,843.0
1980	2,766	859,193	859,193	100.9	<u>3,665.3</u>
					Total \$ 13,609.5

Sources: 1970-79 Araujo, pp. 68 and 117

1980 - Unpublished data Banco Central do Brasil

^{a/} Deflated by Index No. 2, Fundacao Getulio Vargas, 1980=100

^{b/} Average nominal interest rate for operating loans was 15% for the period 1970-78, and 18% for marketing and investment loans. In 1979, the rates for operating and marketing loans rose to 33%, and 38% for investment loans. Assumed length of loan was 9 months, 3 months, and 12 months for operating, marketing and investment loans, respectively. Exchange rate June 1980: CR \$52.30 = US \$1.00.

1980, the real value quadrupled again (Table 1). Total annual lending rose from about \$400 million U.S. in 1960 to about \$16 billion in 1980. The ratio of agricultural credit to value of farm production exceeded one in 1975. Table 1 shows Brazilian inflation rates during the 1970's. These rates are typical of the past three decades. Nominal interest rates on loans, however, have been relatively fixed, usually resulting in negative real rates. During the 1970's real interest rates ranged from zero in 1972-73 to minus 30 percent for some loans in 1980. The total volume of purchasing power transferred from lenders to borrowers in the 1970's exceeded \$13 billion U.S., and the transfer exceeded \$3.5 billion in 1980 alone!

Little data exist on the magnitude of interest rate subsidies in other countries. Total loans made in all other countries may total about U.S. \$20 billion. After Brazil the next largest agricultural credit portfolios are in India and Mexico with about \$6 billion U.S. each. If it is assumed that the average real interest rate on all loans outside Brazil is about minus 5 percent, then the implicit subsidy is about \$1 billion, which when added to Brazil implies \$2 to 4 billion in interest subsidies each year.

Who is receiving this very large income transfer in Brazil? Recent studies show that only about 15 percent of the farmers in Brazil receive formal loans in most years. Census data in 1970 and 1975 showed that 10 or 11 percent of the farmers, those with over 100 hectares of land, received

60 to 70 percent of the total value of formal loans extended (Araujo). Research in Costa Rica and the Dominican Republic suggest that this high degree of loan concentration is common. Gonzalez-Vega helps to explain why this concentration results from the mutual interest of lenders and borrowers. Vogel also presents arguments that show why it is very difficult to force even nationalized lenders to lessen this loan concentration.

Loan Default

In recent years several agricultural credit programs have collected virtually none of the loans extended, e.g., Jamaica, Ghana and Kenya. Default rates of 40 to 60 percent are common in many countries. While the financial system may eventually collect part of these overdue loans, it often happens that 20 to 30 percent of the loans are essentially stolen from the lender through nonrepayment. Over the years non-repayment of loans has seriously undermined lending activities in India, the Philippines, Bolivia, Ghana Honduras and a number of other countries. These repayment problems can seriously undermine the vitality of financial intermediaries.

In most countries default problems among small borrowers often make the headlines. All too often it is concluded that it is only the poor borrower who does not repay. Poor repayment performance is often rationalized by policy makers on the basis of non-repaid loans being welfare payments for the poor. At the same time, while it is seldom

publicly reported, it is not uncommon for a number of very large agricultural loans to be in default in many countries (Boakye-Dankwa). In some cases politicians may force lenders to tolerate defaults as a way of allocating political patronage to well-off borrowers. Small loans to the poor may make up the large majority of the number of loans in default, but it is not uncommon for a majority of the total value of defaulted loans to come from medium and large sized loans held by the well-to-do. The relevant measure of the income transferred by default is the total amount stolen, not the number of thefts.

The income transfer of defaulted loans is enormous. If 10% of the \$20 billion^{1/} in estimated loans made worldwide (excluding Brazil) are never repaid, then \$2 billion is transferred from lenders to borrowers.

Conclusions

Although difficult to document, it is increasingly apparent that rural financial markets have a powerful impact on the distribution of wealth and income in many low income countries. Rapid increases in the volume of agricultural loans, inflexible nominal rates of interest, persistent inflation, and loan default contribute to the income concentration process. It is too often forgotten that all of the benefits from loan use are proportional to the amount of

^{1/} Default is not a serious problem in Brazil.

credit used. Non-borrowers get no benefit from the leverage afforded by loans, get no benefit from negative real rates of interest, and cannot default. A large majority of the rural poor receive no formal loans, and therefore receive no borrowing benefits. Likewise, borrowers of small amounts receive small leverage benefits, small income transfers due to negative real rates of interest, and are able to take only small amounts if they default on their loans. At the same time, borrowers of large amounts can receive large benefits through leverage, and through negative real rates of interest and through default.

The amount of income transferred through negative interest rates and loan defaults is enormous. Together these two sources represent \$4 to 6 billion in purchasing power transferred to borrowers per year. Total lending for all agricultural purposes by the World Bank in 1981 was only \$3.8 billion by comparison. Assistance for agricultural credit by donors is a small stream compared to the river of benefits transferred to borrowers through these credit systems.

Even under the best of circumstances, it is unlikely that financial markets can significantly improve rural income distributions. Even if all loan defaults are eliminated, positive real rates of interest are charged on all agricultural loans, and poor savers are adequately rewarded for saving, leverage will always favor the large borrower.

It is also unlikely that stringent controls by policy makers can ever force lenders to spread their loan portfolios when interest rates are controlled. Reducing the default problem and increasing the real rate of interest would, however, substantially reduce the extent to which financial markets worsen income distributions. We conclude that more of the resources currently wasted in attempts to assist the poor through distorted financial markets ought to be channeled elsewhere. Offering attractive savings alternatives is one of the main ways that financial markets could consistently help the poor.

Notes

- 1/ We appreciate the assistance of Charles L. Wright in providing some of the data used in this paper.

References

- Adams, D. W and J. L. Tommy, "Financing Small Farms: The Brazilian Experience 1965-69," Agricultural Finance Review, Vol. 35, October 1974, pp. 36-41.
- Araujo, P. F. C. de, "Analise da Politica de Credito a Agricultura Brasileira," unpublished Livre-Docente thesis, Universidade do Sao Paulo, Piracicaba, Sao Paulo, Brasil, September 1980.
- Boakye-Dankwa, Kwadwo, "A Review of the Farm Loan Repayment Problem in Low Income Countries," Savings and Development, Vol. 3, 1979, pp. 235-252.
- Gonzalez-Vega, C., "Cheap Agricultural Credit: Redistribution in Reverse," unpublished paper prepared for a Colloquium on Rural Finance, World Bank, Washington, D.C., September 1-3, 1981.
- Meyer, R. L. and others. "Rural Capital Markets and Small Farmers in Brazil," in Small Farmer Credit in South America, A.I.D. Spring Review of Small Farmer Credit, Vol 3, Agency for International Development, Washington, D.C., February 1973.
- Ong, M. L. and others, "Voluntary Rural Savings Capacities in Taiwan, 1960-70," American Journal of Agricultural Economics, Vol. 58, August 1976, pp. 578-582.
- Rego, A. J. Costa and C. L. Wright, "Uma Analise do Distribuicao do Credito Rural no Brasil," Revista de Economia Rural, Vol. 19, No. 2, Abr/Jun., 1981.
- Sayad, J., "The Impact of Rural Credit on Production and Income Distribution in Brazil," in Rural Financial Markets in Low Income Countries: Their Uses and Abuses, J. D. Von Pischke and others, Editors, Baltimore: John Hopkins University Press, forthcoming.
- Vogel, R. C., "Cheap Agricultural Credit and the Distribution of Income in Costa Rica," unpublished paper, Department of Economics, Southern Illinois University, 1977.